

Title (en)

METHOD FOR CLEANING A GAS MIXTURE BY ADDING OZONE

Title (de)

VERFAHREN ZUR REINIGUNG EINES GASGEMISCHES DURCH OZONZUGABE

Title (fr)

PROCÉDÉ DE NETTOYAGE D'UN MÉLANGE GAZEUX PAR AJOUT D'OZONE

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Application

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Abstract (en)

[origin: WO2022079004A1] The invention describes methods for cleaning a gas mixture. In a first step a) a gas mixture is provided, the gas mixture comprising a gas selected from the group consisting of a methane-containing biogas (3, 7) which is obtained by fermentation of organic material and which has a methane concentration of at least 40 vol.% and a pyrolysis gas which is obtained by thermal treatment of organic material and which has a carbon monoxide concentration of at least 2 vol.% or a combination thereof. The gas mixture also comprises an impurity from the group of volatile organic compounds (VOC), the gas mixture having a VOC concentration of 0.0001 to 0.2 vol.%. In a second step b), 0.0001 to 12 vol. % ozone is added to the gas mixture, which ozone oxidizes at least part of the VOC in the gas mixture. In a third step d), the gas mixture from the second step is brought into contact with a VOC-adsorbing adsorber selected from the group consisting of activated carbon, activated coke, silica gel, aluminum oxide, molecular sieve and mixtures thereof, in order to clean the gas mixture.

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